

## REMARKS

Claims 1-4, 6, 8-9, 11-12, 15, 17-19, 21, 23, 25-29, 31, and 34-46 are pending. Claims 5, 7, 10, 13-14, 16, 20, 22, 24, 30, and 32-33 were previously cancelled without prejudice or disclaimer. Claims 1, 8, 11, 17, and 23 have been amended. Support for the amended claims is in the specification at least at paragraph [1020].

### **Claim Rejection – 35 U.S.C. §112**

The Office has rejected claim 8, under 35 U.S.C. §112. Claim 8 has been amended to overcome this rejection. Therefore, Applicants respectfully request withdrawal of the §112 rejection.

### **Claims 11, 21, and 43-44 are Allowable**

The Office has rejected claims 11, 21, and 43-44, under 35 U.S.C. §102 (e), as being anticipated by U.S. Patent No. 7,425,984 (“Chen”). Applicants respectfully traverse the rejections.

The cited portions of Chen do not disclose or suggest the specific combination of claim 11. For example, the cited portions of Chen do not disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11.

In contrast to claim 11, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual images, each virtual image having a different resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. In Chen, the video processor processes image data captured by a component sensor. Chen, col. 5, ll. 3-22. The cited portions of Chen do not disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11. Hence, claim 11 is allowable. Claims 21 and 43-44 are allowable, at least by virtue of

their dependence from claim 11.

**Claims 12, 15 and 19 are Allowable**

The Office has rejected claims 12, 15, and 19, under 35 U.S.C. §103 (a), as being unpatentable over Chen. Applicants respectfully traverse the rejections.

Claims 12, 15, and 19 are allowable, at least by virtue of their dependence from claim 11.

**Claims 17-18 and 32-33 are Allowable**

The Office has rejected claims 17-18 and 32-33, under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of U.S. Patent No. 7,015,954 ("Foote"). Claims 32 and 33 have been cancelled without prejudice or disclaimer. Applicants respectfully traverse the remaining rejections.

Claims 17-18 depend from claim 11. The cited portions of Chen do not disclose or suggest at least one element of claim 11. The cited portions of Foote fail to disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Chen. For example, the cited portions of Foote fail to disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11. In contrast to claim 11, Foote discloses steering a virtual camera to "interesting locations" as determined from sensors that capture audio and motion. Foote discloses image selection based on audio or motion analysis. Foote, col. 4, ll. 5-20. Foote also discloses detecting motion or audio in a particular region and pointing a camera toward the particular region. Foote, col. 12, ll. 10-35, col. 15, ll. 1-10. Foote also discloses combining images of a camera array, storing the combined image in memory, and selecting a part of the combined image for display. Foote, col. 18, ll. 15-22. The cited portions of Foote do not disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11. Therefore, the cited portions of Chen and Foote, individually or in combination, fail to disclose or suggest at least one element of claim 11, from which claims 17-18 depend. Hence, claims 17-18 are allowable, at least by virtue of their dependence from an allowable claim.

**Claim 34 is Allowable**

The Office has rejected claim 34 under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of U.S. Patent No. 6,791,076 ("Webster"). Applicants respectfully traverse the rejection.

Claim 34 depends from claim 11. As explained above, the cited portions of Chen do not disclose or suggest at least one element of claim 11. The cited portions of Webster fail to disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Chen. For example, the cited portions of Webster fail to disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11. In contrast to claim 11, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. The cited portions of Webster do not disclose or suggest that individual pixels of a first image module and a second image module are randomly accessible by a processing engine, as in claim 11. Therefore, the cited portions of Chen and Webster, individually or in combination, fail to disclose or suggest at least one element of claim 11, from which claim 34 depends. Hence, claim 34 is allowable, at least by virtue of its dependence from claim 11.

**Claims 1, 3-4, 6, 8, 23, 25-27 and 35-40 are Allowable**

The Office has rejected claims 1, 3-4, 6, 8, 23, 25-27 and 35-40, under 35 U.S.C. §103 (a), as being unpatentable over Chen, in view of Webster. Applicants respectfully traverse the rejections.

The cited portions of Chen and Webster do not disclose or suggest the specific combination of claim 1. For example, the cited portions of Chen and Webster fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1.

In contrast to claim 1, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual

images, each virtual image having a different resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. In Chen, the video processor processes image data captured by a component sensor. Chen, col. 5, ll. 3-22. The cited portions of Chen do not disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1.

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In further contrast to claim 1, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. The cited portions of Webster fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1.

Therefore, the cited portions of Chen and Webster, individually or in combination, fail to disclose or suggest the specific combination of claim 1. Hence, claim 1 is allowable. Claims 3-4, 6, 8, 35-36, and 39-40 are allowable, at least by virtue of their dependence from claim 1.

The cited portions of Chen and Webster do not disclose or suggest the specific combination of claim 23. For example, the cited portions of Chen and Webster fail to disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23.

In contrast to claim 23, Chen discloses a compound camera with component cameras at different locations and with different viewing angles. The views of the component cameras are combined to create a virtual image with increased resolution. Chen, col. 9, ll. 35-45. Chen also describes a video processor to emulate various depths of field to provide a plurality of virtual images, each virtual image having a different resolution. Chen, col. 8, ll. 1-10 and col. 8, ll. 50-60. Chen also discloses that component image sensors and a video processor can be integrated onto one printed circuit board or onto a single integrated circuit. Chen, col. 5, ll. 15-20. In Chen, the video processor processes image data captured by a component sensor. Chen, col. 5, ll. 3-22. The cited portions of Chen do not disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing

engine, as in claim 23.

In further contrast to claim 23, Webster discloses that a lens may be rotated to adjust focus and that the lens and an image sensor can be integrated into the same package. Webster, col. 4, l. 65-col. 5, l. 10. The cited portions of Webster fail to disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23.

Therefore, the cited portions of Chen and Webster, individually or in combination, fail to disclose or suggest the specific combination of claim 23. Hence, claim 23 is allowable. Claims 25-27 and 37-38 are allowable, at least by virtue of their dependence from claim 23.

#### **Claims 2 and 9 are Allowable**

The Office has rejected claims 2 and 9, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, in view of U.S. Patent No. 5,920,337 ("Glassman"). Applicants respectfully traverse the rejections.

Claims 2 and 9 depend from claim 1. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 1. The cited portions of Glassman fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Glassman fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1. In contrast to claim 1, Glassman discloses that both lens and sensor can be formed on a substrate using integrated circuit fabrication techniques and that the lenses can be arranged in a cylindrical distribution. Glassman, col. 10, l. 65-col. 11, l. 5. The cited portions of Glassman fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1. Therefore, the cited portions of Chen, Webster and Glassman, individually or in combination, fail to disclose or suggest at least one element of claim 1, from which claims 2 and 9 depend. Hence, claims 2 and 9 are allowable, at least by virtue of their dependence from an allowable claim.

**Claims 28-29 and 31 are Allowable**

The Office has rejected claims 28-29 and 31, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, in view of U.S. Patent No. 6,987,258 (“Mates”). Applicants respectfully traverse the rejections.

Claim 28-29 and 31 depend from claim 23. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 23. The cited portions of Mates fail to disclose or suggest the elements of claim 23 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Mates fail to disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23. In contrast to claim 23, Mates discloses a plurality of photo detector elements in an integrated circuit, a micro lens array and “image integration circuitry.” Mates, col. 2, ll. 55-65, col. 3, ll. 20-25, and col. 4, ll. 30-40. The cited portions of Mates do not disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23. Therefore, the cited portions of Chen, Webster, and Mates, individually or in combination, fail to disclose or suggest at least one element of claim 1, from which claims 28-29 and 31 depend. Hence, claims 28-29 and 31 are allowable, at least by virtue of their dependence from an allowable claim.

**Claims 41-42 and 45-46 are Allowable**

The Office has rejected claims 41-42 and 45-46, under 35 U.S.C. §103 (a), as being unpatentable over Chen and Webster, in view of Foote. Applicants respectfully traverse the rejections.

Claims 41-42 depend from claim 1. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 1. The cited portions of Foote fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Foote fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1. In contrast to claim 1, Foote discloses steering a virtual camera to “interesting locations” as determined from sensors that capture audio

and motion. Foote discloses image selection based on audio or motion analysis. Foote, col. 4, ll. 5-20. Foote also discloses detecting motion or audio in a particular region and pointing a camera toward the particular region. Foote, col. 12, ll. 10-35, col. 15, ll. 1-10. Foote also discloses combining images of a camera array, storing the combined image in memory, and selecting a part of the combined image for display. Foote, col. 18, ll. 15-22. The cited portions of Foote fail to disclose or suggest that individual pixels of a first image sensor lens module and a second image sensor lens module are randomly accessible by a processing engine, as in claim 1. Therefore, the cited portions of Chen, Webster, and Foote, individually or in combination, fail to disclose or suggest at least one element of claim 1, from which claims 41-42 depend. Hence, claims 41-42 are allowable, at least by virtue of their dependence from an allowable claim.

Claims 45-46 depend from claim 23. As explained above, the cited portions of Chen and Webster do not disclose or suggest at least one element of claim 23. The cited portions of Foote fail to disclose or suggest the elements of claim 23 not disclosed or suggested by the cited portions of Chen and Webster. For example, the cited portions of Foote fail to disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23. In contrast to claim 23, Foote discloses steering a virtual camera to “interesting locations” as determined from sensors that capture audio and motion. Foote discloses image selection based on audio or motion analysis. Foote, col. 4, ll. 5-20. Foote also discloses detecting motion or audio in a particular region and pointing a camera toward the particular region. Foote, col. 12, ll. 10-35, col. 15, ll. 1-10. Foote also discloses combining images of a camera array, storing the combined image in memory, and selecting a part of the combined image for display. Foote, col. 18, ll. 15-22. The cited portions of Foote fail to disclose or suggest that individual pixels of a first digital image sensor and a second digital image sensor are randomly accessible by a processing engine, as in claim 23. Therefore, the cited portions of Chen, Webster, and Foote, individually or in combination, fail to disclose or suggest at least one element of claim 23, from which claims 45-46 depend. Hence, claims 45-46 are allowable, at least by virtue of their dependence from an allowable claim.

## CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or

rendered obvious by the cited portions of the cited references as applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the rejections, as well as an indication of the allowability of each of the pending claims.

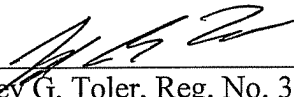
Any changes to the claims in this response, which have not been specifically noted to overcome a rejection based upon the cited art, should be considered to have been made for a purpose unrelated to patentability and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

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Date

  
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